



May 17, 2012 **RE-ISSUED 11/19/2013**

SLUDGEHAMMER GROUP LTD.
DR. DANIEL WICKMAN
336 S DIVISION RD
PETOSKEY MI 49770

Re: Description: SEWAGE TREATMENT APPARATUS (Tier 3- downsizing & vertical separation credit)
Manufacturer: SLUDGEHAMMER GROUP LTD.
Product Name: SLUDGEHAMMER - AEROBIC BACTERIAL GENERATOR
Model Number(s): SLUDGEHAMMER S-46
[MAX. DWF 450 GPD; 1.5 - 3.0 MAX. BOD5/DAY]

Product File No: 20120114

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. **This approval is valid until the end of July 2017.**

This approval is contingent upon compliance with the following stipulation(s):

- This product must be sized based on daily wastewater flow (gallons per day). The gallons per day value must be at least 150 gallons per day per bedroom.
- Installation and servicing of this product must be in accordance with the manufacturer's instructions. A copy of the manufacturer's installation and servicing instructions must be given to the owner of the system.
- When this product receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L and fecal coliform of less than or equal to 10,000 cfu/100ml.
- This product must be utilized in accordance with the manufacturer's printed installation instructions and this product approval. If there is a conflict between the manufacturer's installation instructions and the product approval, the product approval requirements will take precedence.
- The outlet baffle of the septic tank, which has this product installed, must have installed an effluent filter capable of filtering particles of 1/8 inch in size or larger.
- A state Sanitary Permit must be obtained when this product is installed.
- This product must be installed in sewage treatment or holding tanks which were approved at the time of existing installation and/or are currently approved for new/replacement installations by this department and meets the sizing requirements for this product use.
- AS OF MARCH 1, 2009 ALL ELECTRICAL CONNECTIONS FOR PRIVATE SEWAGE SYSTEMS MUST COMPLY WITH S. SPS 316.300 (FORMERLY S. COMM 16.300) WIRING METHODS.
- When this product is installed in a POWTS component, it is considered a modification of the existing POWTS. A state sanitary permit must be obtained when this product is to be installed in a POWTS component. Installation of this product may necessitate evaluation and further modification of the POWTS where this product will be installed. Whichever reviewing agency (governmental unit or state) reviewed and approved the original POWTS plans, shall review the proposed modifications to the existing POWTS.
- A copy of this approval letter and the manufacturer's printed installation and maintenance instructions must be supplied to the buyer of this product and the property owner.
- Because many Commerce approved products are readily available for sale on the internet; it is important that buyers in Wisconsin are aware of approval stipulations for Commerce-approved products.

For example, in the state of Wisconsin, the installation of this product/device in a POWTS requires a credentialed/licensed person, local or state plan review, and/or the issuance of a state sanitary permit. See applicable codes—chs. SPS 305 and 381-387 (formerly ch. Comm 5 and 81-87), <http://commerce.wi.gov/SB/SB-DivCodesListing.html>.

It is recommended that when required (a credentialed/licensed person, plan review and a state sanitary permit), such information is included in written and electronic communications (brochures/advertisements/webpages, etc.) regarding this product/device.

- The elevation of the system's dispersal component infiltrative surface must be above the estimated highest groundwater elevation or bedrock by the distance prescribed in column labeled "Fecal Coliform $\leq 10,000$ cfu/100 mL" in Table SPS 383.44-3, Wis. Adm. Code.
- When this product is installed in a POWTS component, a properly credentialed/licensed person must perform the installation.
- All electrical components must meet NEC and in the case of pump/aerators, all must maintain a visual and/or audible alarm in case of failure/need for maintenance.
- This product must be installed in sewage treatment tanks that were approved at the time of existing installation and/or currently approved for new/replacement tank installation by the Department, Division of Safety and Buildings, for use with this product.
- This approval for the above-referenced PRODUCT FILE No. does not provide for the inclusion of this product in an existing failing POWTS; products to rejuvenate failing POWTS must have separate approval by the department for chemical or physical restoration (CPR). [s. SPS 383.53].
- This product must be maintained at least annually, in that the SludgeHammer Blend bacterial additive must be replaced on an annual basis.
- Any and all risers used with the installation of this product/device must have department product approval, s. SPS 384.10.
- A copy of this approval letter must accompany each installation of this product in the State of Wisconsin.
- This product must be installed in a department-approved tank that meets the design criteria for this product, as specified by the device manufacturer. For concrete tanks see: http://dsps.wi.gov/php/sb-ppalopp/prodcode_result.php/STC/SEWAGE_TANKS_CONCRETE.

TABLE 1
INSPECTION, MAINTENANCE AND PUMPING
PRODUCT/ (Models): SLUDGEHAMMER
(S46 AND S86)

Initial/Startup Inspection/ Maintenance: Initial 2-years of operation serviced by manufacturer's representative or so trained credentialed person

Routine Inspection/Maintenance: Sludgehammer® Blend must be exchanged at least annually; proper disposal required.

Ongoing Pumping Cycle And/Or Requirements: 2-4 years or as required by local or State codes*

Upstream Effluent Filter: see stipulations herein

Back-Wash Cycle: N/A

Effluent Performance Levels: CLASS I NSF-40 LISTED

BOD5 Credit For Downsizing Distribution Area: YES

Fecal Credit For Reduction Of Vertical Separation: YES

NOTE: 1. Manufacturer may require service contract and train the installers.

2. The installation of Sludgehammer S-46 or S-86 shall not delay or replace any servicing, inspection or maintenance schedules as required in ch. SPS 383.

3. Proper disposal of spent bacteria is required; manufacturer may require maintenance/servicing agreement and certified installer

For seasonal occupancy refer to manufacturer's installation manual.

* Proper function based on domestic wastewater or flows with similar wastewater characteristics.

- Nitrate removal claims have not been verified by the department, nor do they apply to any POWTS having a SludgeHammer ® S-46 or S-86 installed.

- The Sludgehammer models must be installed in a tank or tanks that comply with the following:
 1. For S-46, the tank volume of the compartment or tank which will house the treatment device must be at least 500 and no greater than 1500 gallons. Liquid level of the compartment or tank which will house the treatment device must be at least 40 inches and no greater than 60 inches.
 2. For S-86, the tank volume of the compartment or tank which will house the treatment device must be at least 800 and no greater than 1600 gallons. Liquid level of the compartment or tank which will house the treatment device must be at least 36 inches and no greater than 96 inches.
 3. Distance that the treatment device must be horizontally away from the tank inlet or the outlet of the first or second compartment or tank must be at least 6 inches and no greater than 36 inches.
 4. The volume of the compartment or tank that does not house the treatment device must be at least 200 gallons and no greater than 1000 gallons.
 5. In tanks containing greater than two compartments, the above sizing requirements will refer only to the first and second compartments of such tanks.
- The SludgeHammer Blend ® bacterial blend must be exchanged at least on an annual basis.
- Any changes to the Sludgehammer Blend® must be submitted to the department for review.

This approval supersedes the approval issued on 7/2/2007 & 11/18/2010 under product file number 20070325.

This approval letter shall be incorporated with your previously approved plans and/or specifications approved under product file number 20070325.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Jean M. MacCubbin, CST
Engineering Consultant--Plumbing Products Review
DSPS WEST, Safety & Buildings Div.
PO Box 2658
201 W Washington Ave.
Madison WI 53703-2658
Phone: 608-266-0955; Fax: 608-283-7456
E-mail: Jean.MacCubbin@WI.GOV